

In the CLAIMS:

Please ADD claims as follows:

39. In a mobile router supporting Mobile IP, a method of requesting one or more networks during registration with a Home Agent, comprising:

composing a registration request packet, the registration request packet including a network allocation extension indicating one or more networks being requested by the mobile router from a Home Agent;

sending the registration request packet to the Home Agent; and

receiving a registration reply packet from the Home Agent, the registration reply including a network allocation extension identifying one or more networks allocated to the mobile router by the Home Agent.

40. The method as recited in claim 39, wherein the network allocation extension indicates a number of subnets being requested by the mobile router.

41. The method as recited in claim 39, wherein the network allocation extension indicates a size of the one or more networks being requested by the mobile router from the Home Agent.

42. The method as recited in claim 39, wherein at least one of the processor and the memory are further adapted for:

detecting a Foreign Agent prior to composing and sending the registration request packet to the Home Agent.

43. The method as recited in claim 39, wherein at least one of the processor and the memory are further adapted for:

selecting from the one or more networks allocated to the mobile router by the Home Agent an IP address; and

configuring an interface of the mobile router with the IP address such that a network coupled to the interface is identified by the IP address.

44. The method as recited in claim 43, further comprising:

deconfiguring the interface of the mobile router such that the interface is not identified by the IP address.

A1 45. The method as recited in claim 44, wherein deconfiguring the interface is performed when a lifetime of the mobile router has expired.

46. The method as recited in claim 44, further comprising:

sending a deregistration request to the Home Agent prior to deconfiguring the interface of the mobile router.

47. The method as recited in claim 39, further comprising:

adding the one or more networks identified in the network allocation extension to a private DHCP pool available to the mobile router.

48. The method as recited in claim 47, further comprising:

removing the one or more networks from the private DHCP pool available to the mobile router.

49. The method as recited in claim 48, wherein removing the one or more networks from the private DHCP pool available to the mobile router is performed when a lifetime of the mobile router has expired.

50. The method as recited in claim 48, further comprising:

sending a deregistration request to the Home Agent prior to removing the one or more networks from the private DHCP pool available to the mobile router.

51. The method as recited in claim 47, further comprising:

updating a registration table to indicate a lifetime granted during registration of the mobile router with the Home Agent.

52. The method as recited in claim 51, further comprising:

deleting an entry from the registration table when the lifetime has expired.

53. The method as recited in claim 39, further comprising:

sending a deregistration request to the Home Agent.

54. The method as recited in claim 53, further comprising:

receiving a deregistration reply from the Home Agent.

55. A computer-readable medium storing thereon computer-readable instructions for

requesting one or more networks during registration with a Home Agent in a mobile router supporting Mobile IP, comprising:

instructions for composing a registration request packet, the registration request packet including a network allocation extension indicating one or more networks being requested by the mobile router from a Home Agent;

instructions for sending the registration request packet to the Home Agent; and

instructions for receiving a registration reply packet from the Home Agent, the registration reply including a network allocation extension identifying one or more networks allocated to the mobile router by the Home Agent.

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56. The computer-readable medium as recited in claim 55, wherein the network allocation extension indicates a number of subnets being requested by the mobile router.

57. The computer-readable medium method as recited in claim 55, wherein the network allocation extension indicates a size of the one or more networks being requested by the mobile router from the Home Agent.

58. The computer-readable medium method as recited in claim 55, wherein at least one of the processor and the memory are further adapted for:

detecting a Foreign Agent prior to composing and sending the registration request packet to the Home Agent.

59. The computer-readable medium method as recited in claim 55, wherein at least one of the processor and the memory are further adapted for:

selecting from the one or more networks allocated to the mobile router by the Home Agent an IP address; and

configuring an interface of the mobile router with the IP address such that a network coupled to the interface is identified by the IP address.

60. The computer-readable medium method as recited in claim 59, further comprising:

deconfiguring the interface of the mobile router such that the interface is not identified by the IP address.

61. The computer-readable medium method as recited in claim 60, wherein deconfiguring the interface is performed when a lifetime of the mobile router has expired.

62. The computer-readable medium method as recited in claim 60, further comprising:

sending a deregistration request to the Home Agent prior to deconfiguring the interface of the mobile router.

63. The computer-readable medium method as recited in claim 55, further comprising:

adding the one or more networks identified in the network allocation extension to a private DHCP pool available to the mobile router.

64. The computer-readable medium as recited in claim 63, further comprising:

removing the one or more networks from the private DHCP pool available to the mobile router.

65. The computer-readable medium as recited in claim 64, wherein removing the one or more networks from the private DHCP pool available to the mobile router is performed when a lifetime of the mobile router has expired.

66. The computer-readable medium as recited in claim 64, further comprising:

sending a deregistration request to the Home Agent prior to removing the one or more

networks from the private DHCP pool available to the mobile router.

67. The computer-readable medium as recited in claim 63, further comprising:

updating a registration table to indicate a lifetime granted during registration of the mobile router with the Home Agent.

68. The computer-readable medium as recited in claim 67, further comprising:

deleting an entry from the registration table when the lifetime has expired.

69. The computer-readable medium as recited in claim 55, further comprising:

sending a deregistration request to the Home Agent.

70. The computer-readable medium as recited in claim 69, further comprising:

receiving a deregistration reply from the Home Agent.

71. A mobile router supporting Mobile IP and adapted for requesting one or more networks during registration with a Home Agent, comprising:

means for composing a registration request packet, the registration request packet including a network allocation extension indicating one or more networks being requested by the mobile router from a Home Agent;

means for sending the registration request packet to the Home Agent; and

means for receiving a registration reply packet from the Home Agent, the registration reply including a network allocation extension identifying one or more networks allocated to the mobile router by the Home Agent.

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